WHAT IS CLAIMED IS:

1. A method for creating accurate time-stamped frames sent between computers via a network, comprising the steps of:

generating a time reference signal;

synchronizing clocks associated with sending and receiving computers with the time reference signal;

creating a test frame including a tag having reserved fields for transmit and receive time stamps;

inserting a transmit time stamp into the reserved transmit time stamp field corresponding to the time on the synchronized clock of the sending computer at the instant the test frame is sent onto the network; and

receiving the test frame having the transmit time stamp and inserting a receive time stamp into the reserved receive time stamp field corresponding to the time on the synchronized clock of the receiving computer when the test frame was received by the receiving computer.

2. The method of claim 1, wherein the time reference signal is generated by a receiver for receiving a universal coordinated time signal.

3. The method of claim 2, wherein the universal coordinated time signal is received via a global positioning system receiver in communication with either the sending or receiving computer.

4. The method of claim 3, wherein the clock and global positioning system receivers are electronically connected on a device which is attachable to an existing multi-master bus of either the sending or receiving computer.

5. The method of claim 4, wherein the device comprises a card interfacing with a multi-master bus of the receiving or sending computer.

6. The method of claim 2, wherein the synchronizing step includes the step of initializing the clocks with the received universal coordinated time signal and over time tracking and averaging the periodically received universal coordinated time signal and adjusting the clock to correspond to the universal coordinated time signal.

7. The method of claim 6, wherein the synchronizing step includes the steps of altering the voltage applied to a voltage controlled crystal oscillator associated with the clock to maintain synchronization with the universal coordinated time signal.

8. The method of claim 1, wherein the clock operates independent of an operating system clock within the sending or receiving computer.

9. The method of claim 1, wherein the insertion of the transmit time stamp into the reserved time stamp field is automatically performed for each test frame without intervention of the sending computer's central processing unit.

10. The method of claim 1, wherein the receiving computer automatically attaches a receive time stamp corresponding to the synchronized time that the frame was received for each frame received.

11. The method of claim 1, wherein the receiving computer detects the tag of each test frame and attaches a receive time stamp corresponding to the synchronized time that the frame was received to only the test frames.

12. The method of claim 1, wherein the creating step includes the step of creating complimentary time information in the reserved transmit and receive time stamp fields to enable the insertion of the synchronized transmit and receive time stamps upon transmit and receipt, respectively.

13. The method of claim 1, wherein the synchronized clocks have a resolution of between 10 and 100 nanoseconds.

14. A method for creating accurate time-stamped frames sent between computers via a network, comprising the steps of:

using a receiver to generate a universal coordinated time reference signal;

synchronizing clocks associated with sending and receiving computers, but operating independently of operating system clocks of the sending or receiving computers, with the universal coordinated time reference signal by initializing the clocks with the received universal coordinated time reference signal and over time tracking and averaging the periodically received universal coordinated time reference signal and adjusting the clock to correspond to the universal coordinated time reference signal;

creating a test frame including a tag having reserved fields for transmit and receive time stamps;

inserting a transmit time stamp into the reserved transmit time stamp field corresponding to the time on the synchronized clock of the sending computer at the instant the test frame is sent onto the network without intervention of the sending computer's central processing unit; and

receiving the test frame having the transmit time stamp and inserting a receive time stamp into the reserved receive time stamp field corresponding to the time on the synchronized clock of the receiving computer when the test frame was received by the receiving computer.

15. The method of claim 14, wherein the universal coordinated time signal is received via a global positioning system receiver in communication with either the sending or receiving computer.

16. The method of claim 15, wherein the clock and global positioning system receivers are electronically connected on a device which is attachable

to an existing multi-master bus of either the sending or receiving computer.

17. The method of claim 16, wherein the device comprises a card interfacing with a multi-master bus of the receiving or sending computer.

18. The method of claim 14, wherein the synchronizing step includes the steps of altering the voltage applied to a voltage controlled crystal oscillator associated with the clock to maintain synchronization with the universal coordinated time signal.

19. The method of claim 14, wherein the receiving computer automatically attaches a receive time stamp corresponding to the synchronized time that the frame was received for each frame received.

20. The method of claim 14, wherein the receiving computer detects the tag of each test frame and attaches a receive time stamp corresponding to the synchronized time that the frame was received to only the test frames.

21. The method of claim 14, wherein the creating step includes the step of creating complimentary time information in the reserved transmit and receive time stamp fields to enable the insertion of the synchronized transmit and receive time stamps upon transmit and receipt, respectively.

22. The method of claim 14, wherein the synchronized clocks have a resolution of between 10 and 100 nanoseconds.

23. A method for creating accurate time-stamped frames sent between computers via a network, comprising the steps of:

using a global positioning receiver in communication with sending and receiving computers to generate a universal coordinated time reference signal;

synchronizing clocks associated with the sending and receiving

computers, but operating independently of operating system clocks of the sending or receiving computers, with the universal coordinated time reference signal by initializing the clocks with the received universal coordinated time reference signal and over time tracking and averaging the periodically received universal coordinated time reference signal and adjusting the clock to correspond to the universal coordinated time reference signal by altering the voltage applied to a voltage controlled crystal oscillator associated with the clock;

creating a test frame including a tag having reserved fields for transmit and receive time stamps;

creating complimentary time information in the reserved transmit and receive time stamp fields;

replacing the complimentary time information in the transmit time stamp field with a transmit time stamp corresponding to the time on the synchronized clock of the sending computer at the instant the test frame is sent onto the network without intervention of the sending computer's central processing unit; and

automatically attaching a receive time stamp corresponding to the time on the synchronized clock of the receiving computer when the frame was received by the receiving computer to every frame received by the receiving computer.

24. The method of claim 23, wherein the clock and global positioning system receivers are electronically connected on a device which is attachable to an existing multi-master bus of either the sending or receiving computer.

25. The method of claim 24, wherein the device comprises a card interfacing with a multi-master bus of the receiving or sending computer.

26. The method of claim 23, wherein the synchronized clocks have a resolution of between 10 and 100 nanoseconds.

27. A method for creating accurate time-stamped frames sent between computers via a network, comprising the steps of:

using a global positioning receiver in communication with sending and receiving computers to generate a universal coordinated time reference signal;

synchronizing clocks associated with the sending and receiving computers, but operating independently of operating system clocks of the sending or receiving computers, with the universal coordinated time reference signal by initializing the clocks with the received universal coordinated time reference signal and over time tracking and averaging the periodically received universal coordinated time reference signal and adjusting the clock to correspond to the universal coordinated time reference signal by altering the voltage applied to a voltage controlled crystal oscillator associated with the clock;

creating a test frame including a tag having reserved fields for transmit and receive time stamps;

creating complimentary time information in the reserved transmit and receive time stamp fields;

replacing the complimentary time information in the transmit time stamp field with a transmit time stamp corresponding to the time on the synchronized clock of the sending computer at the instant the test frame is sent onto the network without intervention of the sending computer's central processing unit; and

detecting the tag of each test frame received by the receiving computer and attaching a receive time stamp corresponding to the time on the synchronized clock of the receiving computer when the test frame was received by the receiving computer to the test frame.

28. The method of claim 27, wherein the clock and global positioning system receivers are electronically connected on a device which is attachable to an existing multi-master bus of either the sending or receiving computer.

29. The method of claim 28, wherein the device comprises a card interfacing with a multi-master bus of the receiving or sending computer.

30. The method of claim 28, wherein the synchronized clocks have a resolution of between 10 and 100 nanoseconds.